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OPP-2004-0159

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Attn: Docket No. OPP-2004-0159

Docket ID Number OPP-2004-0159- Metam-Sodium Risk Assessments

The purpose of this letter is to comment on EPA's risk assessments for metam-sodium, which were made available for public comment on June 2, 2004 (69 FR 31104). The County Sanitation Districts of Los Angeles County (Districts) are concerned that the risk assessments do not adequately consider impacts of metam-sodium as applied directly to sewers and that the risk assessments neglect potential adverse water quality impacts from the presence of n-nitrosodimethylamine in metam-sodium.

Background

The Districts are a confederation of 25 independent special districts that serve the water pollution control and solid waste management needs of over five million people in Los Angeles County, California. Fifteen of the districts have collectively constructed an extensive regional sewerage system known as the Joint Outfall System (JOS), which conveys and treats approximately 450 million gallons per day (MGD) of wastewater from 72 cities and unincorporated county areas. The JOS consists of seven treatment/water reclamation plants (WRPs) and 1,200 miles of large diameter trunk sewers that form a network connecting the treatment plants and ocean outfalls off Whites Point on the Palos Verdes Peninsula. The Districts also operate four WRPs in northern Los Angeles County serving the communities in and around the cities of Santa Clarita, Lancaster, and Palmdale. On an annual basis, over 50 MGD of reclaimed water is reused for applications including groundwater recharge, landscape irrigation and industrial uses. The remainder is discharged to inland surface waters. The designated beneficial uses of the receiving waters to which the Districts' WRPs discharge are diverse and vary depending on location. These existing and potential use designations include groundwater recharge, water recreation, warm fresh water habitat, wildlife habitat, commercial and sport fishing, and rare, threatened or endangered species spawning, reproduction, and early development. Solid material removed during treatment is digested and dewatered. The resulting biosolids are either landfilled or beneficially reused for agricultural land application.

Risks Associated With Sewer System Applications

In addition to various agricultural uses, metam-sodium is registered for use as a root-killing agent in sanitary sewer systems. The risks associated with use of metam-sodium to kill roots in sanitary sewers were not explored in EPA's risk assessments. Although the amount of active ingredient used in sewer

root killing applications is small compared to the amount used for agricultural purposes, direct application of metam-sodium to sewers poses unique risks that need to be considered.

One risk associated with the application of metam-sodium to sewers is the risk that vapors from its degradation product, methyl isothiocyanate (MITC), may reach buildings and basements on treated sewer lines. The label for one metam-sodium root killer, Sanafoam Vaporooter II, states "Consideration must be given to all sewer service lines and building elevations and basements for the possibility of foam coming up out of drains. Consideration must be given to distance between houses and sewers to be treated, depth of sewers compared to drains in buildings, line obstructions, broken and empty traps. Drains which may be subject to backup and flooding must be plugged.... Building occupants should exit structures if the rotten egg or sulfur-like odor of metam-sodium is detected. Open windows and ventilate with fans." While this language does offer some suggestions for minimizing risks to residents during application of metam-sodium root killers, it does not ensure that there will be no exposure of residents. Such exposure could be significant, and should be considered by EPA in its risk assessments. Additionally, this language recommends that affected building occupants evacuate a structure if metam-sodium odors are encountered during sewer treatment. However, it does not state how this advice will be communicated to occupants on sewer lines being treated. Typically residents and other building occupants on sewer lines being treated with metam-sodium are not been notified prior to application. Thus, they would be unaware of the need to evacuate a structure if sulfur-like odors were encountered.

Additionally, metam-sodium root killers could have adverse impacts on the operation of wastewater treatment plants downstream of the sewers being treated. The label for Sanafoam Vaporooter II does include a maximum usage rate in sewers of 15 gallons of Sanafoam Vaporooter II Liquid Concentrate for each million gallon per day (MGD) of sewerage flow into a wastewater treatment plant. The risk assessments should include a discussion of potential adverse impacts to downstream wastewater treatment plants, along with supporting calculations to show that the recommended maximum application rate is safe for wastewater treatment plants.

Since wastewater treatment plants differ and some may be more sensitive than others, we recommend that the label instructions require notification of the downstream wastewater treatment plant prior to application. Currently labeling states, "Inform appropriate wastewater treatment plant officials prior to use so they may check for any unusual rotten egg or sulfur-like odor of metam-sodium above that of sewage and monitor the performance of filter beds or digesters." The Districts are not currently receiving notification of all uses of metam-sodium upstream of our wastewater treatment plants, so this language clearly needs to be strengthened. Suggested language is, "Downstream wastewater treatment officials must be informed prior to every application, regardless of size, so that potential impacts on the receiving wastewater treatment plant can be monitored. Potential impacts include unusual rotten egg or sulfur-like odors of metam-sodium above that of sewage, reduction in performance of biological treatment processes, and increased effluent concentrations of n-nitrosodimethylamine (a contaminant in metam-sodium)."

EPA's risk assessments also do not mention potential water quality impacts from n-nitrosodimethylamine (NDMA) in metam-sodium. NDMA is a potent carcinogen. Because of its high potency, water quality standards for NDMA are very low. The National Recommended Water Quality Criteria for NDMA are 0.00069 ug/L for water bodies that are current or potential drinking water sources and 3.0 ug/L for water bodies that have no potential to be used for drinking water.¹ Testing run on metam-sodium foam for root killing indicated a concentration of NDMA in the as-applied foam of 1,100

¹ 65 Federal Register 66443

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ug/L.² For each 1 MGD of treatment capacity at the downstream wastewater treatment plant, the maximum amount of foam that could be applied each day to meet the 0.00069 ug/L standard would be 0.63 gallons per day.³ Since the Sanafoam Vaporooter II Liquid Concentrate is diluted with water at a 24:1 ratio, the maximum amount of Sanafoam Vaporooter II Liquid Concentrate that could be applied per MGD of wastewater treatment capacity is 0.026 gallons, for wastewater treatment plants that discharge to existing or potential drinking water sources with no dilution. When discharges are diluted with in-stream flows, the application rate could be higher. Labeling instructions could be changed to reflect these considerations, or manufacturers of metam-sodium root killers could be required to formulate their products with metam-sodium that is NDMA-free.

Finally, although the Districts are not responsible for surface water run-off that is tributary to receiving waters, we could be adversely impacted if the water bodies referenced in our NPDES permits are impaired due to excessive NDMA concentrations. Therefore, it should be noted that metam-sodium used in non-sewer applications could also contain NDMA and thus potentially have significant adverse quality impacts during use.

Contact Information

The Districts appreciate your consideration of our comments. If you have any questions about this letter or require additional information, please contact Ann Heil of the Sanitation Districts' Industrial Waste Section by phone at 562/699-7411, extension 2950, or by e-mail at ahheil@lacsds.org.

Very truly yours,

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² "NDMA Source Control: Sources of n-nitrosodimethylamine in the Orange County Sanitation District Service Area, August 2000 – November 2001," Orange County Sanitation District, California, Source Control Division, March 27, 2002.

³ $(1,000,000 \text{ gal/day})(0.00069 \text{ ug/L})/(1100 \text{ ug./L}) = 0.63 \text{ gal/day}$. This assumes no destruction or creation of NDMA during treatment.